REMARKS

This application has been carefully reviewed in light of the Office Action dated April 13, 2006. Claims 1 to 6, 8 to 20, 26 to 29 and 31 to 34 are pending in the application, of which Claims 1, 14, 16, 19, 20, 27, 29, 31, 33 and 34 are independent. Reconsideration and further examination are respectfully requested.

Initially, Applicant thanks the Examiner for the indication that Claim 34 is allowed.

Claims 2 to 7, 14 and 34 were objected to because of various informalities. Claim 7 having been canceled, without prejudice or disclaimer of subject matter, and Claims 2 to 6, 14 and 34 having been amended herein in accordance with the Examiner's suggestion, withdrawal of this objection is respectfully requested.

Claim 16 was rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 16 having been amended to correct the alleged lack of antecedent basis, withdrawal of this rejection is respectfully requested.

Claims 1 to 3, 6, 7, 14 to 17, 27, 29, 31 and 33 were rejected under 35 U.S.C. § 102(e) over U.S. Published Appln. No. 2001/0013897 (Kowno). Reconsideration and withdrawal of this rejection are respectfully requested.

The present invention concerns processing an image signal by first enlarging the image signal, then reducing the image signal and then storing the reduced image signal.

Turning to specific claim language, amended independent Claim 1 is directed to an imaging apparatus which includes an imaging unit which generates, by capturing an image of a subject, an image signal corresponding to an image having an

arbitrary number of H pixels by W pixels which is not greater than a predetermined number of P pixels by Q pixels in vertical and horizontal directions; an enlarging unit which generates an enlarged image signal corresponding to an enlarged image having the number of P pixels by Q pixels by performing enlargement processing on the image signal having the number of H pixels by W pixels generated by the imaging means; a reducing unit which generates a reduced image signal corresponding to a reduced image having a predetermined number of M pixels by N pixels which is not greater than the predetermined number of P pixels by Q pixels in vertical and horizontal directions by performing reduction processing on the enlarged image signal corresponding to the enlarged image having the number of P pixels by Q pixels; and a recording unit for recording the image signal outputted by the reducing means on a recording medium, wherein the enlarged image signal is inhibited from the being recorded on the recording medium.

Amended Claim 14 is directed to an imaging apparatus comprising an imaging means for generating an image signal corresponding to an arbitrary image size equal to or smaller than a first predetermined image size, the generated image signal being converted into an image signal corresponding to a second predetermined image size smaller than the first predetermined image size by said imaging apparatus; enlarging means for performing enlargement processing on said image signal generated by said imaging means to generate an image signal corresponding to said first predetermined image size; reducing means for performing reduction processing on said image signal generated by said enlarging means to generate an image signal corresponding to said second predetermined image size; and recording means for recording the image signal corresponding to said second predetermined image size generated by said reducing means on a recording

medium, wherein said image signal generated by said enlarging means is inhibited from being recorded on the recording medium.

Amended Claim 16 is directed to an imaging apparatus comprising an imaging means having an electronic zoom function; an enlarging means for performing enlargement processing on an image signal generated by said imaging means by using a variable magnification in accordance with a magnification used in said electronic zoom function; a reducing means for performing reduction processing on the image signal processed by said enlarging means by using a fixed factor; and a recording means for recording the image signal corresponding to a second predetermined image size generated by said reducing means on a recording medium, wherein the image signal processed by said enlarging means is inhibited from being recorded on the recording medium.

Amended Claim 19 is directed to an imaging apparatus comprising an imaging means for generating, by capturing an image of a subject, an image signal corresponding to an image having an arbitrary number of H pixels by W pixels which is not greater than a predetermined number of P pixels by Q pixels in vertical and horizontal directions. The imaging apparatus comprises an enlarging means for generating an enlarged image signal corresponding to an enlarged image having the number of P pixels by Q pixels by performing cubic convolutional interpolation processing on the image signal having the number of H pixels by W pixels generated by said imaging means; a reducing means for generating a reduced image signal corresponding to a reduced image having a predetermined number of M pixels by N pixels which is not greater than the predetermined number of P pixels by Q pixels in vertical and horizontal directions by performing finite-impulse-response filtering on the enlarged image signal corresponding to the enlarged image having the number of P pixels by Q pixels; and a recording means for

recording the image signal outputted by said reducing means on a recording medium, wherein the enlarged image signal is inhibited from being recorded on the recording medium.

Claim 20 is directed to an imaging apparatus comprising an imaging means for generating, by capturing an image of a subject, an image signal corresponding to an image having an arbitrary number of H pixels by W pixels which is not greater than a predetermined number of P pixels by Q pixels in vertical and horizontal directions; an enlarging means for generating an enlarged image signal by performing linear-interpolation processing on the image signal having the number of H pixels by W pixels generated by said imaging means; a reducing means for generating a reduced image signal corresponding to a reduced image having a predetermined number of M pixels by N pixels which is not greater than the predetermined number of P pixels by Q pixels in vertical and horizontal directions by performing finite-impulse-response filtering on the enlarged image signal corresponding to the enlarged image having the number of P pixels by Q pixels; and a recording means for recording the image signal outputted by said reducing means on a recording medium, wherein the enlarged image signal is inhibited from being recorded on the recording medium.

The applied references are not seen to disclose or to suggest the features of independent Claims 1, 14, 16, 19 and 20 and in particular, are not seen to disclose or suggest at least the features of generating an enlarged image signal, generating a reduced image signal from the enlarged image signal and recording the reduced image signal on a recording medium, wherein the enlarged image signal is inhibited from being recorded on the recording medium.

Kowno discloses an image processing apparatus which creates an enlarged image (zooming) by interpolating values of pixels of the enlarged image from the values of each pixel of the original image stored in the frame memory and stores the enlarged image in the frame memory. Kowno also discloses creating a reduced image by reducing specified pixels from the original image stored in the frame memory area and storing the reduced image in the frame memory area. (Kowono Paragraph 80). Kowno additionally discloses creation of thumbnail images by reducing bitmap data of each image data. (Kowno, Paragraph 112).

However, Kowno fails to disclose or suggest recording a reduced image signal on a recording medium, wherein an enlarged image signal used to generate the reduced image signal is inhibited from being recorded on the recording medium. In addition, in regard to Claim 1, Kowno fails to disclose or suggest an enlarging unit which generates an enlarged image signal corresponding to an enlarged image having the number of P pixels by Q pixels by performing enlargement processing on the image signal having the number of H pixels by W pixels generated by said imaging means and a reducing unit which generates a reduced image signal corresponding to a reduced image having a predetermined number of M pixels by N pixels which is not greater than the predetermined number of P pixels by Q pixels in vertical and horizontal directions. In regard to Claim 14, Kowno also fails to disclose or suggest an imaging means for generating an image signal corresponding to an arbitrary image size equal to or smaller than a first predetermined image size, the generated image signal being converted into an image signal corresponding to a second predetermined image size smaller than the first predetermined image size. In regard to Claims 19 and 20, Kowno also fails to disclose or suggest reducing means for generating a reduced image signal corresponding to a reduced image having a

predetermined number of M pixels by N pixels which is not greater than the predetermined number of P pixels by Q pixels in vertical and horizontal directions by performing finite-impulse-response filtering on the enlarged image signal corresponding to the enlarged image having the number of P pixels by Q pixels.

In light of the deficiencies of Kowno as discussed above, Applicant submits that amended independent Claims 1, 14, 16, 19 and 20 are now in condition for allowance and respectfully requests same.

Amended independent Claims 27 and 31 are directed to a method and computer-readable medium, respectively, substantially in accordance with the apparatus of Claim 1. Accordingly, Applicant submits that Claims 27 and 31 are also now in condition for allowance and respectfully requests same.

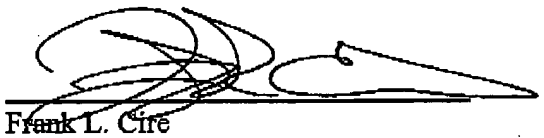
Amended independent Claims 29 and 33 are directed to a method and computer-readable medium, respectively, substantially in accordance with the apparatus of Claim 14. Accordingly, Applicant submits that Claims 29 and 33 are also now in condition for allowance and respectfully requests same.

The other pending claims in this application are each dependent from the independent claims discussed above and are therefore believed patentable for the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney may be reached in our Costa Mesa, CA office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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